Kansas Department of Health and Environment

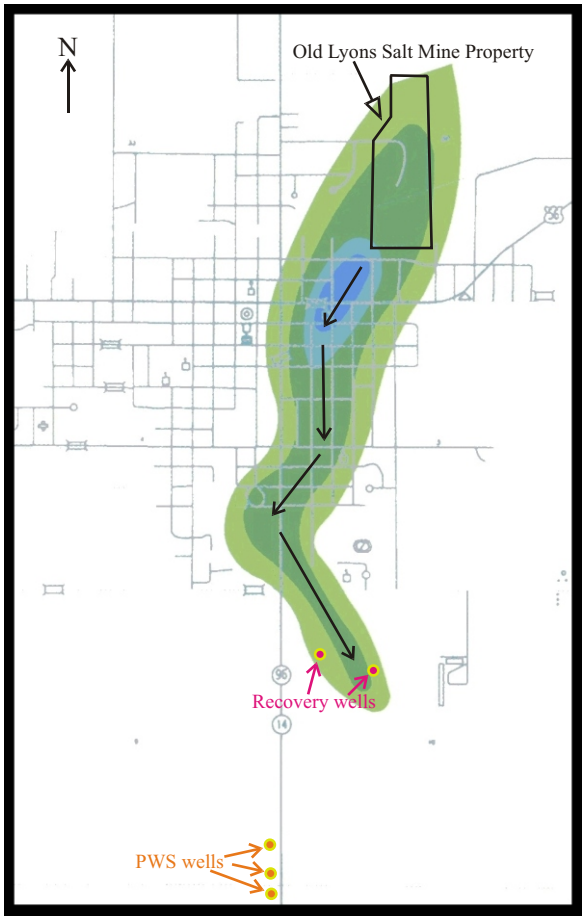
Bureau of Environmental Remediation/Remedial Section

State Water Plan Contamination Remediation Program

Protecting Lyons Public Water Supply Well Field

Background:

Based on a Comprehensive Investigation conducted by KDHE's State Water Plan program, it was determined that a chloride plume potentially threatened three Lyons public water supply wells. In January 1997 additional investigative activities were conducted at the site to further delineate the plume. Data collected during the 1997 sampling activities indicated the contamination had not yet migrated into the influence of the three PWS wells. If left uncontrolled, the contamination would continue to migrate towards the public water supply wells. The source for the plume was determined to be historical salt mining activities at the Old Lyons Salt Mine.



Extent of chloride contamination in relation to the public water supply well.

Drill rig drilling a monitoring well.

Solution:

In the summer of 1997, KDHE installed two ground water recovery wells in strategic locations to intercept the fugitive chloride plume upgradient of the Lyons PWS wells and prevent the plume from impacting the Lyons PWS wells. KDHE also installed necessary piping to transfer the chloride contaminated ground water to the North American Salt Company facility for reuse or disposal through a state/private partnership. The remedial system construction was completed in early 1998. Both ground water recovery and containment wells were operational in June 1998. Continued monitoring has demonstrated that the containment system is successful at controlling further migration of the chloride plume.

An approximate total of 429 million gallons of chloride contaminated ground water were removed from the aquifer via recovery wells between 1998 and 2002.

Benefits:

- **429 million gallons of contaminated water removed.**
- **Public water supply well field serving 3,500 people protected.**

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